

- BS
-- 6. -- (New) - An organic/inorganic hybrid materials which are prepared from the hydrolysis of metal aliphatic acryl alkoxide compound having the general formula of $M[-OR_1-O-CO-C(R_2)=CR_3R_4]_n$, into a mixture of metal oxide nanoparticles and acrylate monomers, the particles are well dispersed in the acrylate matrix. Then the mixture is polymerized by free radical polymerization, and an organic/inorganic material is formed that contains metal oxide nanoparticles dispersed in polyacrylate.
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7 (New) An organic/inorganic hybrid material contains metal oxide nanoparticles dispersed in polyacrylate as claimed in claim 1, wherein said the material exhibits high refractive index and low birefringence.
- 8 (New) An organic/inorganic hybrid material contains metal oxide nanoparticle dispersed in polyacrylate as claimed in claim 1, wherein said the material is useful for optical applications.
- 9 (New) A compound metal aliphatic acryl alkoxide compound having the general formula of $M[-OR_1-O-CO-C(R_2)=CR_3R_4]_n$ as claimed in claim 1, wherein M is a metal element or a mixture of metal element, the metal can be selected from the metals in the periodic table except toxic metal such as lead, the metals with the atomic number greater than the silicon element is preferred such as titanium, bismuth, the n value is dependent on the valence of metal, while R_1 is a straight chain alkyl group or branched alkyl group. The straight chain is preferred with the formula of $(-CH_2-)_n$, where n is equal to 1 to 12 and n is preferably equal to 1 to 4, R_2, R_3, R_4 can be a hydrogen atom or straight chain alkyl group $(-CH_2-)_n$ or branched alkyl group, the straight chain is preferred with the formula of $(-CH_2-)_n$, where n is equal to 1 to 12 and n is preferably equal to 1 to 4.